

Applicants : Manfred Brandl, et al.  
Serial No. : 10/521,322  
Filed : August 24, 2005  
Page : 4 of 10

Attorney's Docket No.: 14603-010US1  
Client Docket No.: P2002,0604USN

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A method of producing a component comprised of at least first and second substrates, the first substrate having an upper surface that contains terminal pads, and the first substrate comprising component structures that are electrically conductive and that are electrically connected to the terminal pads, the second substrate having a lower surface that faces the upper surface of the first substrate, the method comprising:

forming grooves having a predefined depth on the lower surface of the second substrate;

forming incisions on an upper surface of the second substrate, the incisions reaching the grooves to form a cutout portion in the second substrate; and

removing the cutout portion to expose the terminal pads;

wherein the grooves and the incisions are formed in substantially straight lines on the second substrate;

wherein the incisions are formed by sawing; and

wherein the cutout portion is defined between a pair of grooves.

2. (Cancelled)

3. (Currently Amended) The method of claim 1 2, wherein the terminal pads are

Applicants : Manfred Brandl, et al.  
Serial No. : 10/521,322  
Filed : August 24, 2005  
Page : 5 of 10

Attorney's Docket No.: 14603-010US1  
Client Docket No.: P2002,0604USN

positioned side by side in a row on the upper surface of the first substrate; and

wherein the cutout portion exposes the row of terminal pads.

4. (Previously Presented) The method of claim 1, wherein the grooves are formed via wet chemical etching, ion beam etching, or plasma etching.

5. (Previously Presented) The method of claim 4, wherein the grooves are defined by a resistance mask that is structured photolithographically.

6. (Previously Presented) The method of claim 1, wherein the grooves are formed by laser cutting.

7. (Currently Amended) The method of claim 1 2, wherein the grooves are formed to a depth that is greater than a cutting depth precision of a sawing process used to form the incisions.

8. (Currently Amended) The method of claim 1, further comprising:  
joining the first and second substrates; and  
shaping at least one of the first and second substrates to produce a clearance between the terminal pads and the second substrate.

9. (Previously Presented) The method of claim 8, further comprising:  
before joining the first and second substrates, applying a covering over at least the

Applicants : Manfred Brandl, et al.  
Serial No. : 10/521,322  
Filed : August 24, 2005  
Page : 6 of 10

Attorney's Docket No.: 14603-010US1  
Client Docket No.: P2002,0604USN

terminal pads to prevent the second substrate from adhering to the terminal pads; and

removing the covering after removing the cutout portion.

10. (Currently Amended) The method of claim 8, wherein the first and second substrates are joined via glass bonding, bonding using ~~by means of~~ bumps, anodic bonding, eutectic bonding, direct bonding of substrate surfaces, or gluing.

11. (Previously Presented) The method of claim 1, wherein the first and second substrates comprise wafers; and

wherein the method further comprises separating individual components from the first and second substrates after the cutout portion is removed.

12. (Previously Presented) The method of claim 11, wherein terminal pads of individual components are on edges of the individual components; and

wherein removal of the cutout portion exposes two adjacent rows of terminal pads for adjacent components.

13. (Currently Amended) The method of claim 1, wherein at least one of the first and second substrates comprises microelectrical components, micro-optical components, micro-mechanical components, or a combination thereof.

14. (Previously Presented) A method of producing a component comprised of first and

Applicants : Manfred Brandl, et al.  
Serial No. : 10/521,322  
Filed : August 24, 2005  
Page : 7 of 10

Attorney's Docket No.: 14603-010US1  
Client Docket No.: P2002,0604USN

second substrates that are joined via an upper surface of the first substrate and a lower surface of the second substrate, the upper surface of the first substrate containing terminal pads, and the first substrate comprising component structures that are electrically conductive and that are electrically connected to the terminal pads, the method comprising:

forming grooves having a predefined depth on the lower surface of the second substrate, the grooves being formed in substantially straight lines via a first formation technique, a pair of the grooves defining a strip-shaped cutout portion of the second substrate;

joining the upper surface of the first substrate and the lower surface of the second substrate;

forming incisions on an upper surface of the second substrate via a second formation technique, the incisions reaching the grooves to separate the cutout portion from a remainder of the second substrate, the first formation technique differing from the second formation technique, and the first formation technique having greater precision than the second formation technique; and

removing the cutout portion to expose the terminal pads.

15. (Previously Presented) The method of claim 14, wherein the grooves are formed via wet chemical etching, ion beam etching, or plasma etching.

16. (Previously Presented) The method of claim 14, wherein the grooves are defined by a resistance mask that is structured photolithographically.

Applicants : Manfred Brandl, et al.  
Serial No. : 10/521,322  
Filed : August 24, 2005  
Page : 8 of 10

Attorney's Docket No.: 14603-010US1  
Client Docket No.: P2002,0604USN

17. (Previously Presented) The method of claim 14, wherein the grooves are formed by laser cutting.

18. (Previously Presented) The method of claim 14, further comprising:  
shaping at least one of the first and second substrates to produce a clearance between the terminal pads and the second substrate.

19. (Previously Presented) The method of claim 14, further comprising:  
before joining the first and second substrates, applying a covering over at least the terminal pads to prevent the second substrate from adhering to the terminal pads; and  
removing the covering after removing the cutout portion.

20. (Previously Presented) The method of claim 14, wherein the first and second substrates are joined via glass bonding, bonding by means of bumps, anodic bonding, eutectic bonding, direct bonding of substrate surfaces, or gluing.